

A<sup>2</sup>  
interacts with the cell membrane of said cell or a component within said cell membrane in vitro whereby the substance comprising said nucleic acid is taken up by the cell via the inherent transport mechanism of the cell.

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4. (Amended) A method according to claim 3, wherein said substance comprises a single or double stranded, linear or circular DNA.

A<sup>3</sup>  
5. (Amended) A method according to claim 1, wherein said substance comprises a single or double stranded RNA.

6. (Amended) A method according to claim 1, wherein said substance is a fusion molecule comprising a nucleic acid part and a protein part.

7. (Amended) A method according to any claim 1, wherein said substance is an expression vector containing specific cDNA.

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A<sup>4</sup>  
9. (Amended) A method according to claim 1, wherein said substance gives rise to a detectable signal.

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A<sup>5</sup>  
13. (Amended) A method according to claim 11, wherein said detectable signal is due to a radioactively tagged nucleic acid.

14. (Amended) A method according to claim 1, wherein said cell is a cell in a tissue or cell culture.

15. (Amended) A method for identification of progenitor cells and/or stem cells comprising using the method according to claim 1.

16. (Amended) The method according to claim 15, wherein said cells after identification are isolated from surrounding cells of other types.

17. (Amended) A method for gene therapy comprising using the method according to claim 1.

18. (Amended) The method according to claim 6, wherein said protein part comprises a pharmaceutically active protein.

19. (Amended) A method for propagation of neural cells comprising using the method according to claim 8.

20. (Amended) The method according to claim 18, wherein said propagated neural cells are suitable for transplantation to patients.

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21. (Amended) A method for detection of a medicinal product comprising cDNA containing expression plasmids comprising using the method according to claim 1.

22. (Amended) A method for diagnostic purposes comprising using the method according to claim 1.

23. (Amended) The method according to claim 8, wherein said protein or detectable signal allows for testing or screening of aforementioned protein or signal.

24. (Amended) A method for introducing a substance comprising a nucleic acid into a mammalian neural stem cell or progenitor cell, wherein said nucleic acid directly interacts with the cell membrane of said cell or a component within said cell membrane in vivo, whereby the substance comprising said nucleic acid is taken up by the cell via the inherent transport mechanism of the cell.

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26. (Amended) A method according to claim 24, wherein said substance comprises a single or double stranded, linear or circular DNA.

27. (Amended) A method according to claim 24, wherein said substance comprises a single or double stranded RNA.

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36. (Amended) A method according to claim 1, wherein said cell is a cell in the central nervous system of a patient.

37. (Amended) A method for identification of progenitor cells and/or stem cells comprising using the method according to claim 24.

38. (Amended) The method according to claim 37, wherein said cells after identification are isolated from surrounding cells of other types.

39. (Amended) A method for gene therapy comprising using the method according to claim 24.

40. (Amended) A method according to claim 28, wherein said protein part comprises a pharmaceutically active protein.

41. (Amended) A method for propagation of neural cells comprising using the method according to claim 30.

42. (Amended) A method for detection of a medicinal product comprising cDNA containing expression plasmids comprising using the method according to claim 24.

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